

United States Environmental Protection Agency  
Region IV  
POLLUTION REPORT

SITE: TVA Kingston Fossil  
BREAK: 2.10  
OTHER: \_\_\_\_\_

**Date:** Thursday, January 08, 2009  
**From:** Les Sims and Steve Spurlin, Federal On Scene Coordinators

**Subject:** Continuation of ER  
TVA Kingston Fly Ash Release  
714 Swan Pond Road, Harriman, TN  
Latitude: 35.894929  
Longitude: -84.534744

<b>POLREP No.:</b>	6	<b>Site #:</b>	A4XP
<b>Reporting Period:</b>	1/6/09-1/7/09	<b>D.O. #:</b>	
<b>Start Date:</b>	12/22/2008	<b>Response Authority:</b>	CERCLA
<b>Mob Date:</b>	12/22/2008	<b>Response Type:</b>	Emergency
<b>Completion Date:</b>		<b>NPL Status:</b>	Non NPL
<b>CERCLIS ID #:</b>		<b>Incident Category:</b>	Removal Action
<b>RCRIS ID #:</b>		<b>Contract #</b>	

#### Site Description

On Monday 12/22/2008, in response to NRC report #893129, and at the request of Roane County EMA and Tennessee EMA, OSC Sims and START responded to a catastrophic dike failure at the Tennessee Valley Authority Kingston Fossil Plant, Harriman, Roane County, TN. A breached settling pond retaining wall caused the release of an estimated 5.4 million cubic yards (approximately 300 acres outside the ash storage areas) of fly ash to the Emory and Clinch Rivers. The incident occurred around 0100 hrs. The cell was one of three at the facility used for dewatering fly ash. The release caused a massive slide that disrupted power, ruptured a major gas line, and destroyed several homes. As a result of the incident, residents in a nearby neighborhood were evacuated and relocated to temporary shelters.

#### Current Activities

01/06/09

##### General Information

Ongoing rainfall has impacted the clean-up operations. The area received a total of 1.42 inches of rainfall today. The significant amount of precipitation has mobilized portions of the ash spill and increased flows down the Emory and Clinch Rivers.

##### EPA Activities

The multi-media Phase 1 Environmental Sampling Plan was submitted by TVA the evening of January 5. The plan is currently undergoing EPA review and recommendations will be made.

EPA continued to monitor particulate concentrations in the work zone and surrounding areas. Rain limited the duration of air monitoring activities today. Six on-site PM-10 readings were collected, values ranged from 10.7 to 26.1 ug/m3. Four off-site PM-10 locations were monitored. Readings range from 5.9 to 16.2 ug/m3. All values attained to date met NAAQS.



10644925

EPA Health Physicist John Richards reviewed TVA analytical radiological data for ash and soil samples. No levels of concern were detected.

Roane County EMA, TVA CEO Tom Kilgore, and EPA OSC Steve Spurlin participated in a public meeting on the evening of January 6. EPA R4 Toxicologist Tim Frederick, TDEC and TDOH personnel were available to answer questions.

#### TDEC Activities

TDEC continues to take action in order to transition oversight responsibilities from the federal to the state level. Soil/ash and air sampling plans were developed and submitted for review and approval. Two TDEC teams began soil sampling activities today. TDEC Solid Waste collected 11 total samples, 4 ash samples of disturbed ash in the vicinity of the cell, and 7 on disturbed portions of private properties. TDEC Air Pollution Control plans to take over on-site activities by the end of the week.

No surface water nor residential well samples were collected today. As TDEC continues to become more integrated into TVA activities, EPA can transition out of emergency response phase.

#### TVA Activities

The rain prohibited seeding operations for the day. Engineering continues to rebuild Swan Pond Circle Road across the bay and Swan Pond Road. Heavy amphibious equipment is being used to excavate trenches in order to channel water and attempt to prevent further flooding. Crews continue to stabilize and restore areas surrounding the dike.

TVA working to develop sediment sampling plan, including procuring a contractor for sediment testing behind underwater dam and preparing a sampling plan for daily monitoring during dredging.

TVA continued real-time air monitoring on 1/6/2009 and air monitoring results continue to be below the NAAQS. Analytical results from the 1/2/2009 for five air samplers located in residential areas immediately adjacent to the plant were received. These samples indicate that concentrations of all metal analyzed are below detection limits.

TVA collected 12 ash samples from 9 sites in and around the ash spill zone. Eleven water samples were collected from the 10 discrete river sampling locations due to the significant precipitation event. This river water sampling will proceed on a Monday, Wednesday, Friday schedule.

Today marked the first full day of operations for the Outreach Center located in Kingston. They continue to manage any community concerns and interests.

01/07/09

An additional 0.45" of rainfall occurred today. Air monitoring continued in the work zone and surrounding residential areas. Twelve on-site PM-10 readings were attained from established locations. Readings ranged from 5.1 to 17.5 ug/m3. Four off-site PM-10 readings were collected and values ranged from 12.3 to 16.5 ug/m3. All values continue to be below NAAQS.

EPA START Contractor deployed to the field with TVA river water sampling teams in order to assist with data collection and in-field management using Trimble units.

EPA OSC David Dorian and START contractor performed radiation survey with Ludlum 19 MicroR Meter. On-site areas in the vicinity of undisturbed areas of the ash cell detected radiation in excess of background levels. All off-site readings attained, including in close proximity of the ash spill, were comparable to background levels.

EPA data management coordinator and START contractors acquired analytical results and preliminary database for TVA and TDEC sampling. EPA combined data and began inputting into SCRIBE database.

#### **TDEC Activities**

TDEC continues with private well monitoring. A total of 48 property owners have placed requests for well sampling. To date, 29 wells have been sampled and results have been received. All data indicates water quality meets MCLs. TDEC expects to sample 20 wells a day until all requests have been met. This sampling program is extended to residents within a 4-mile radius of the release.

TDEC and TVA have begun discussions of engineering solutions for remediation issues.

#### **TVA Activities**

Engineering and construction activities continue in an attempt to restrict and control the movement of the ash spill.

TVA collected 11 surface water samples from ten discrete locations: four from the Emory River, four from the Clinch River, one from the Tennessee River and two from Watts Bar Nuclear Plant as per the Monday, Wednesday, Friday sampling plan.

#### **Planned Removal Actions**

EPA is in the process of transitioning out of the emergency response phase and into state oversight of clean-up activities.

#### **Key Issues**

TVA Kingston has taken full responsibility for the cleanup and engaged the necessary resources to mitigate.

[www.epaosc.net/TVAKingstonFlyAshRelease](http://www.epaosc.net/TVAKingstonFlyAshRelease)